

Western Electric Co., Incorporated,  
Engineering Dept.,  
New York.

(2 Pages) Page #1.  
Issue 4 - BT-431182.  
Replacing all previous issues.  
April 15, 1920.

*No Print*

METHOD OF OPERATION  
SIGNAL CIRCUIT

Flashing Re-Call.- Full Mechanical Switching System.

GENERAL DESCRIPTION

1. This signal circuit is used with zero or zero and intercepting operator's cord circuits to flash the supervisory lamp, when the subscriber desires to re-call the operator in a full mechanical power driven system. When the switchhook is depressed, and released, to re-call the operator, the cord circuit supervisory lamp flashes and continues to flash without further effort on the part of the subscriber until the talking key in the cord circuit is operated. The circuit is provided with a buzzer as an auxiliary signal.

DETAILED DESCRIPTION

OPERATION

FIGURE 1.

2. When a re-call signal is given, the release of the supervisory relay in the cord circuit causes ground to be connected to the lead marked "to cord circuit", thereby causing the FL relay to operate through the .2 ohm winding. The operation of the FL relay connects the 500 ohm winding of the FL-1 relay in series with the 250 ohm winding of the B38 relay to ground through the interrupter causing the relay to operate and release alternately. The operation of the FL-1 relay causes the buzzer to operate and also makes and breaks the connection to the cord supervisory lamp circuit, causing the lamp to flash. When the talking key is operated, ground is disconnected from the lead marked "to cord circuit", thereby releasing the FL relay and FL-1 relay, restoring the circuit to normal.

FIGURE 1A

3. When the re-call signal is given, battery is connected to the lead marked "to cord circuits", thereby closing the circuit through the B10 relay and the interrupter to ground, causing the relay to operate and release alternately. The cord circuit supervisory lamp flashes under control of the interrupter. The operation of the B10 relay operates the buzzer. When the talking key is operated, the B10 relay releases, restoring the circuit to normal.

(2 Pages) Page #2.  
Issue 4 - BT-431182.  
Replacing all previous issues.  
April 15, 1920.

CIRCUIT REQUIREMENTS

|                             | <u>OPERATE</u>  | <u>NON-OPERATE</u>   | <u>RELEASE</u>  |
|-----------------------------|---|--|---|
| B10                         | After a soak of<br>approximately .3 amp.<br>Test .024 amp.<br>Readj. .022 amp.  |  | After a soak of<br>approximately .3 amp.<br>Test .0019 amp.<br>Readj. .002 amp. |
| B38 FL<br>.2 ohm<br>winding | After a soak of<br>approximately .6 amp.<br>Test .080 amp.<br>Readj. .076 amp.  |  | After a soak of<br>approximately .6 amp.<br>Test .021 amp.<br>Readj. .023 amp.  |
| 250 ohm<br>wdg.             | Through winding:<br>Test .013 amp.<br>When applied in<br>series with 500<br>ohm winding of<br>the E145 relay,<br>both windings<br>in parallel with<br>the 1000 ohm<br>winding of the<br>E145 relay.<br>Test .024 amp.                               |  |   |
| E145                        | Through 500 ohm<br>winding:<br>Test .018 amp.<br>Readj. .012 amp.<br>When applied in<br>series with 250<br>ohm winding of the<br>B38 relay both in<br>parallel with 1000<br>ohm winding of the<br>E145 relay.<br>Test .035 amp.<br>Readj. .022 amp. | Through relay:<br>Test .0085 amp.<br>Readj. .009 amp.<br>When applied in<br>series with 250<br>ohm winding of<br>the B38 relay<br>both in parallel<br>with 1000 ohm<br>winding of the<br>E145 relay.<br>Test .015 amp.<br>Readj. .016 amp. |   |

ENG.--CAL-RV.  
7/22/21.

CHK'D.--FAB.

APPROVED - C.L.SLUYTER, G.M.L.